resolving the polynucleotide fragments by electrophoresis; and

detecting the fragments by means of the chromophore or fluorophore.

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32. A method of determining the sequence of a polynucleotide by analyzing polynucleotide fragments generated by a polynucleotide sequencing technique, each of said polynucleotide fragments being tagged with a chromophore or fluorophore, comprising:

introducing the polynucleotide fragments tagged with chromophores or fluorophores into an electrophoretic medium;

separating the polynucleotide fragments by electrophoresis in said electrophoretic medium;

detecting the polynucleotide fragments separated by electrophoresis by means of the chromophores or fluorophores; and

determining a polynucleotide sequence from which the polynucleotide fragments were generated based on the polynucleotide fragments detected.

33. The method according to claim 31, wherein the polynucleotide is DNA.

34. The method according to claim 31, wherein the method is a chain termination method using one or more primer oligonucleotides and said primer oligonucleotides are tagged with the chromophores or fluorophores.

35. The method according to claim 31, wherein the method is a chemical degradation method and the polynucleotide fragments are tagged with the chromophores or fluorophores.

36. The method according to claim 31, wherein the tagged fragments are obtained from a primer extension reaction in which the primer is tagged with a chromophore or fluorophore such that the tagged fragments resulting from at least one of the sequencing reactions A, C, G and T is distinguishable from other fragments by the spectral characteristics of the tag.

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37. The method according to claim 31, wherein the tagged fragments from at least two of the sequencing reactions A, C, G and T are distinguishable from one another and from other fragments by the spectral characteristics of the tags.

38. The method according to claim 31, wherein the tagged fragments from all of the sequencing reactions A, C, G and T are distinguishable from one another by the spectral characteristics of the tags.

39. The method according to claim 31, wherein the polynucleotide fragments are provided with an amino group, which is coupled to a dye molecule.

40. The method according to claim 31, wherein the step of detecting the polynucleotide fragments is performed during the electrophoresis.

41. The method according to claim 32, wherein the polynucleotide is DNA.

42. The method according to claim 32, wherein the method is a chain termination method using one or more

primer oligonucleotides and said primer oligonucleotides are tagged with the chromophores or fluorophores.

43. The method according to claim 32, wherein the method is a chemical degradation method and the polynucleotide fragments are tagged with the chromophores or fluorophores.

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44. The method according to claim 32, wherein the tagged fragments are obtained from a primer extension reaction in which the primer is tagged with a chromophore or fluorophore such that the tagged fragments resulting from at least one of the sequencing reactions A, C, G and T is distinguishable from other fragments by the spectral characteristics of the tag.

45. The method according to claim 32, wherein the tagged fragments from at least two of the sequencing reactions A, C, G and T are distinguishable from one another and from other fragments by the spectral characteristics of the tags.

46. The method according to claim 32, wherein the tagged fragments from all of the sequencing reactions A, C, G and T are distinguishable from one another by the spectral characteristics of the tags.

47. The method according to claim 32, wherein the polynucleotide fragments are provided with an amino group, which is coupled to a dye molecule.

48. The method according to claim 32, wherein the step of detecting the polynucleotide fragments is performed during the electrophoresis.

49. A method for determining the sequence of a polynucleotide which comprises:

providing polynucleotide fragments tagged with chromophores or fluorophores, wherein the chromophores or fluorophores are distinguishable from others by their spectral characteristics;

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resolving the polynucleotide fragments by electrophoresis; and

detecting the fragments by means of the chromophores or fluorophores.

50. A method for determining the sequence of a polynucleotide which comprises:

providing fragments of the polynucleotide to be sequenced which are tagged with chromophores or fluorophores, wherein the fragments from one or more of the four sequencing reactions A, C, G or T are distinguishable from fragments of the other reactions by their spectral characteristics;

resolving the fragments by electrophoresis; and

detecting the fragments as they are being resolved by means of the spectral characteristics of the chromophores or fluorophores.

51. The method according to claim 49 wherein the polynucleotide is DNA.

52. The method according to claim 49, wherein the method is a chain termination method using one or more

primer oligonucleotides and primer oligonucleotides are labeled with the chromophores or fluorophores.

53. The method according to claim 49, wherein the method is a chemical degradation method and the polynucleotide fragments are labeled with the chromophores or fluorophores.

54. The method according to claim 49, wherein the tagged fragments are obtained from a primer extension reaction in which the primer is tagged with a chromophore or fluorophore such that the tagged fragments resulting from at least one of the sequencing reactions A, C, G and T is distinguishable from other fragments by the spectral characteristics of the tag.

55. The method according to claim 49, wherein the tagged fragments from at least two of the sequencing reactions A, C, G and T are distinguishable from one another and from other fragments by the spectral characteristics of the tags.

56. The method according to claim 49, wherein the tagged fragments from all of the sequencing reactions A, C, G and T are distinguishable from one another by the spectral characteristics of the tags.

57. The method according to claim 49, wherein polynucleotide fragments are provided with an amino group, which is coupled to a dye molecule.

58. The method according to claim 49, wherein the DNA fragments are provided with a protected amino group, which

is deblocked and coupled to a dye molecule subsequent to the sequencing reaction.

59. The method according to claim 50 wherein the polynucleotide is DNA.

60. The method according to claim 50, wherein the method is a chain termination method using one or more primer oligonucleotides and primer oligonucleotides are labeled with the chromophores or fluorophores.

61. The method according to claim 50, wherein the method is a chemical degradation method and the polynucleotide fragments are labeled with the chromophores or fluorophores.

62. The method according to claim 50, wherein the tagged fragments are obtained from a primer extension reaction in which the primer is tagged with a chromophore or fluorophore such that the tagged fragments resulting from at least one of the sequencing reactions A, C, G and T is distinguishable from other fragments by the spectral characteristics of the tag.

63. The method according to claim 50, wherein the tagged fragments from at least two of the sequencing reactions A, C, G and T are distinguishable from one another and from other fragments by the spectral characteristics of the tags.

64. The method according to claim 50, wherein the tagged fragments from all of the sequencing reactions A, C,

G and T are distinguishable from one another by the spectral characteristics of the tags.

65. The method according to claim 50, wherein polynucleotide fragments are provided with an amino group, which is coupled to a dye molecule.

66. The method according to claim 50, wherein the DNA fragments are provided with a protected amino group, which is deblocked and coupled to a dye molecule subsequent to the sequencing reaction.

67. The method according to claim 57, wherein the products of each of the different sequencing reactions are coupled with a different color dye, aliquots of the dye labeled reaction are electrophoresed, and detected by means of the dye after their separation.

68. The method according to claim 65, wherein the products of each of the different sequencing reactions are coupled with a different color dye, aliquots of the dye labeled reaction are electrophoresed, and detected by means of the dye after their separation.

69. The method according to claim 58, wherein the products of each of the different sequencing reactions are coupled with a different color dye, aliquots of the dye labeled reaction are electrophoresed, and detected by means of the dye after their separation.

70. The method according to claim 66, wherein the products of each of the different sequencing reactions are coupled with a different color dye, aliquots of the dye

labeled reaction are electrophoresed, and detected by means of the dye after their separation.

71. The method according to claim 56, wherein the tagged fragments are labeled with the fluorophores fluorescein, eosin, tetramethyl rhodamine, and substituted rhodamine.

72. The method according to claim 64, wherein the tagged fragments are labeled with the fluorophores fluorescein, eosin, tetramethyl rhodamine, and substituted rhodamine.

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